

## Abstract

The invention is based on a coolant circuit (10) with at least one heat source (12), a radiator (14), and a bypass line (22), which connects a radiator inlet (18) to a radiator return (20) and whose junction (24) has a control valve (26) disposed in it, whose throttle body (58) can be electrically triggered as a function of operating parameters and environmental parameters by means of at least one control unit (40, 42) and divides the coolant flow between the radiator inlet (18) and the bypass line (22).

It is proposed that according to a characteristic curve of the control valve (26), the control unit (40, 42) determine a set-point value (50) for the position of the throttle body (58), which sets a ratio of the radiator volume flow to the total coolant flow at the control valve (26) which equals the ratio between the difference of a temperature at the outlet (36) of the bypass line (22) minus a set-point temperature at the inlet of the heat source (12) and the difference of the temperature at the outlet (36) of the bypass line (22) minus a temperature at the outlet of the radiator (14), where the ratio of the radiator volume flow to the total coolant flow is set equal to zero when there is a negative value and is limited to one when there is a value greater than one.

(Fig. 1)